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WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

46148

JUN 3 - 1930

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REPORT FOR THE WEEK ENDING JUNE 3, 1939.

HAVRE:

Scattered local showers totalling 0.30 inch occurred, and temperatures slightly above normal prevailed. Rainfall in May was 1.31 inches, most of which came during the last half of the month.

Stands of all crops in the experimental field have materially improved following the recent precipitation. Corn has emerged, however, Russian thistles are also appearing in numbers and harrowing will probably be necessary in the near future. Very early fallow and certain grass and alfalfa projects were cultivated. Routine dates of seeding grass, alfalfa, sweetclover, corn, and sorgo were made, surface moisture conditions being favorable for germination. Plowless fallow in fields E-1 and C received a first cultivation for weed control.

Spring calves were branded and vaccinated for blackleg. The entire herd, numbering about 300 head, has been moved to the school section lease in preparation for driving to the Bear Paw Mountain summer range.

Visitors included M. M. Hoover, A. D. Stoesz, and W. W. Austin of the Soil Conservation Service, Lincoln, Nebr.; M. A. Hein and L. A. Clark of the Division of Forage Crops; and about fifty Hill County farmers accompanied by Ben Daggett, County Extension Agent.

Maximum temperature, 91°; minimum, 42°; precipitation, 0.30 inch.

JUDITH BASIN:

The precipitation for the month of May was 1.83 inches, lacking 0.30 inch of equalling the station average.

Strong winds and high temperatures on Monday and Tuesday caused damage to thick plantings of grass and some winter wheat. A good rain of 0.88 inch the last of the week has again restored crops for the time being.

Station work has consisted of cultivation of grasses, hoeing of weeds, repair of haying machinery, and odd jobs.

Visitors included: M. M. Hoover, A. D. Stoesz, and W. W. Austin of the Soil Conservation Service; M. P. Hansmeier, Extension Conservationist of Bozeman, M. A. Hein of the Division of Forage Crops and Diseases Washington, D. C., and L. A. Clark, Bozeman, in charge of Forage Crops in Montana.

Maximum temperature, 87°; minimum, 36°; precipitation, 0.88 inch.

HUNTLEY:

Much of the past week was rainy or too wet to work in the fields. The recent precipitation added to that received a week ago has established a nice reserve of soil moisture for most crops. Winter wheat and crested wheatgrass plantings which were beginning to show serious drought injury in May are again green and growing well. Winter rye has developed rapidly during the last few days and is now heading out. Stands of corn and other late crops have improved through the emergence of seedlings started by the recent rains.

Coincident with the more favorable growing conditions for crops, insect pests have increased in numbers and annoyance. Cutworms are numerous in all fields, but their work is especially noticable in such plantings as the winter wheat nursery, corn seed block, and soybean plots. Flea beetles, webworms, and leafhoppers of various kinds are also taking their toll from garden and field crops. Grasshoppers are hatching throughout the adjacent range lands, but nowhere have local concentrations been reported as serious, although there are plenty of hoppers in the area to constitute a potential danger.

Maximum temperature, 92°; minimum, 40°; precipitation, 1.46 inches. Total precipitation for May, 2.21 inches.

SHERIDAN:

More gentle rains extending over a 2-day period, with a minimum run-off, further improved prospects here by providing some reserve of moisture beyond immediate crop needs. Alfalfa still remains short, however, and grasses are heading short. Temperatures have continued fairly low since the rain, and most crops now show considerable improvement over their condition a week ago.

Winter rye headed the first of the week, and winter wheat and some of the earliest varieties of barley are now in the boot. Soybeans and some of the forage sorghum plots were sown the 29th, the only day on which any field work was possible during the week. The remainder of the flax and corn emerged early in the week.

Visitors during the week included R. M. Williams of the Moccasin station, and Dr. A. D. Stoesz and Mr. Wayne W. Austin of the Soil Conservation Service.

Maximum temperature, 89°; minimum, 38°; precipitation, 1.92 inches.

MANDAN:

Agronomy - The week was characterized by a wide range of weather conditions, from extreme high oppressive temperature on Decoration Day, to quite cool the end of the week. A fine rain falling during a period of more than 12 hours, and amounting to 1.23 inches, was recorded on the morning of June 2. There was practically no run-off.

Sorghum and millet varieties were seeded on the 31st. Seeding of Sudan grass was started in field P, but rains prevented finishing. Flax was also seeded during the week on the rotation experiments. Seed bed conditions are ideal for germination.

Plowing for fallow was started on June 1 and is nearly completed. The ground is about as moist for fallow plowing as it has been for a long time.

Grasshopper bait spread on pasture terraces in field P on May 29 gave us the best early kill observed at this station. There was no trouble at all in finding a dozen dead hoppers to the square foot in areas where they were numerous to start with. Records are being kept as to amount of bait spread per mile traveled.

A delegation of State Hail Insurance inspectors visited the station on June 3 to observe cropping methods and crop varieties. Marked interest was shown in the grasshopper kill in field P.

Maximum temperature, 99°; minimum, 45°; precipitation, 1.48 inches.

Cooperative Grazing Experiment - The steers in the grazing experiment were weighed May 31. Good gains were recorded for all pastures, though the rotation pasture did not show up as well as the others.

Horticulture - Trees and shrubs are making a good growth after the recent rains. Budded stock in the nursery is also growing rapidly. Good stands have been obtained. Conditions are now more favorable for a good crop of fruit.

Work during the week included spraying, cultivating, and suckering and budding stock in the nursery.

The final planting of vegetables in the acre garden was completed during the week. Since the 1 inch rain on May 24-25 the stands of the earlier plantings have improved greatly. All varieties are somewhat behind normal growth due to drought and delayed germination.

Tomato plants in the variety testing blocks and breeding plots were set out during the week. A high temperature of 99° on May 30 caused considerable damage to foliage and tops necessitating much replanting but the final stands obtained are good.

Snowballs and villosa and josikea lilacs are at present in full bloom, providing the only touch of color at present about the grounds. Hybrid rugosa roses and peonies are full of buds, but seem somewhat backward according to the season.

Arboriculture - Cultivation and hoeing of weeds have been carried on during the week. Weeds are making rapid growth everywhere. Brush and thistles were hauled when the land was too wet for hoeing. All seedlings have made rapid response to the very favorable precipitation. Blister beetles are present in large numbers and are doing considerable injury to Siberian pea-tree and honey locust seedlings.

BELLE FOURCHE:

The first half of the week was unusually hot. Maximum temperatures of 96° and 100° were recorded on May 29 and 30, respectively, the latter temperature being equal to the highest of record for May. The hot, dry weather was injurious to all growing crops, but some relief was afforded by a moderate rain of 0.43 inch on June 1, and the cloudy, abnormally cool weather which prevailed during the last 3 days. Although the rain was the heaviest received this year, moisture penetrated the dry soil to a depth of only 2 inches, and a strong wind following the rain dried the soil rapidly. This moisture may be sufficient to enable considerable small grain and corn to germinate, but the sprouted seed will be unable to survive unless additional rain is received at an early date.

The total precipitation for May was 0.60 inch as compared with the 31-year average for the month of 2.92 inches. The total from January 1 to May 31, 2.25 inches, is 3.80 inches less than average for the 5-month period. The total precipitation recorded from June, 1938 to May, 1939, inclusive, was only 6.74 inches. This is 1.51 inches less than received in any other similar 12-month period during the 31 years of record. The mean temperatures for May, 62°, was 7° higher than the average for the month, and it was equal to the second highest of record for May. The evaporation for May was approximately 1 inch greater than normal.

Corn plots were duckfooted or disked and prepared for seeding, and corn was planted in dry soil. Manuring and plowing of fallow plots were completed.

Maximum temperature, 100°; minimum, 36°; precipitation, 0.43 inch.

ARCHER:

The fore part of the week was warm and dry while the latter part was very cool and dry. The total precipitation for May was 1.26 inches. The month was next to the driest May in the history of the station. In 1919 May received only 0.31 inch of precipitation.

Dry conditions have severely damaged perennial plants and winter cereals. Spring seeded crops, while very much in need of rain, are in fair condition. It is reported that grasshoppers are very numerous in some localities and are destroying the crops.

During the week the potatoes, millet, Sudan grass, and beans were planted, a 10-acre field of winter rye was cut and raked; the garden plants were set out; and the evergreen plantings were watered.

Dr. A. D. Stoesz, Wayne W. Austin, Oscar K. Barnes, and N. H. French of the Soil Conservation Service were station visitors.

Maximum temperature, 87°; minimum, 35°; precipitation, 0.10 inch.

NORTH PLATTE:

The precipitation for May totaled 2.86 inches, or 0.21 inch below normal. This moisture came mostly in small showers which were not of much benefit to crops. One rain of over an inch was recorded. Since January 1, the total precipitation is 5.89 inches or 0.98 inch below normal. A good rain fell on Thursday which will be of considerable benefit to crops. On Memorial Day, the writer drove through sections of the panhandle of the State where early prospects for a wheat crop were among the best in the State. Because of lack of the usual spring rains, the winter wheat was firing severely. Since Tuesday, rains have fallen over this area. If there are normal June rains, the winter wheat yields will be only fair. Crop prospects at the station are at present as good as any where in the State. Winter wheat on fallow is well headed and will make good yields with normal rains. Wheat on cropped land has made excellent recovery with the recent moisture. Oats are headed.

Dr. A. L. Frolik and Mr. L. Newell of the College of Agriculture were at the station this week to make observations of the irrigated pasture project.

Maximum temperature, 89°; minimum, 44°; precipitation, 0.48 inch.

AKRON:

Showers and cooler weather dominated the past week. The station shared two rains lightly. The first arrived just in time to swell the May total to 2.11 inches, a little more than two-thirds of the term average of 2.94 for the month. April had only 0.80 inch precipitation, which gives a good picture of the intensity of the drought period just passed. Accumulated yearly deficiency, however, was only about 0.35 inch on May 1, and only about 1.25 inches on June 1. Agricultural outlook on the station, and throughout the country-side has brightened as a result of the recent rains.

Brunker oats, and Club Mariout barley are practically headed at an average height of about 14 inches. Rotation corn and forage sorghum were planted early in the week. Other field work was the cultivation of the date of seeding corn experiment, the current seeding of date of seeding experiment, and the cultivation of rotation alleys. Considerable field time was spent on weeding the cereal small grain nursery, where weeds render harvesting practically impossible. First grasshopper poison bait was scattered early in the week.

J. J. Curtis and D. W. Robertson brought Horace Smith down Thursday to remain through the active cropping season. The two former inspected the cereal small grains and helped to assemble the sorghum nursery seed.

Maximum temperature, 89°; minimum, 40°; precipitation, 0.57 inch.

COLBY:

Decoration Day was hot, windy, and dusty with some soil blowing. Wednesday was also hot and windy but not dusty. Thursday morning there were local showers, and Thursday night light to heavy showers were general over this section of the State. The showers were much heavier in Colby than at this station. The morning shower registered 0.41 inch in Colby and only 0.14 at the station. The night shower registered 0.51 inch in Colby and only 0.25 here. Yesterday was cold, but today is much warmer and windy and dusty. There is some soil blowing, also.

The whole countryside has taken on a much greener and very promising appearance since the rains of last week. Most of the fields of winter wheat are practically headed out, and the spring small grains are in various stages of heading. The straw is short but will probably be tall enough to harvest nicely. The fields which were burnt considerably before the rain have recovered remarkably. The thin fields look good but are beginning to get weedy. There is no reserve of moisture where the stand is reasonably good, as the winds and the growing plants take it out of the soil fast. Another soaking rain is needed.

On the D. L. A. project 16 plots have better than half a stand, 14 of which are on fallow and two in stubble. Those in corn stubble, milo stubble, bean ground, and corn stalks have only a few scattering wheat plants, except where the corn was in 80-inch rows. The 80-inch row corn plot has almost half a stand. The others range from almost nothing to almost half a stand. In the MF 11 series the stubble plot has a 75 percent stand and the 4-year fallow has a 5 percent stand. Plot 554 C, which has a top dressing of straw, is the earliest of the winter wheat plots and is practically headed out. The oats are also headed. The spring wheat and barley plots are partially headed. The corn on the project came up today.

Maximum temperature, 90°; minimum, 45°; precipitation, 0.39 inch. Precipitation for May, 1.83 inches; for January 1 to May 31, 1939, 7.71 inches; 52-year average, 6.23 inches.

HAYS:

The first part of the week was very warm, breezy, and dry. This condition was changed by a 0.33 inch shower Thursday night, since when it has been cooler and not so windy.

The wheat, however, has now passed the stage where rain will do it much good. Cool weather will do more to make some wheat out of the wrecked prospects than rain.

Most of the plots of wheat sown on cropped land will not be worth harvesting. Likewise most of the barley and oats will be a complete failure. These crops are burned to the ground and will not be harvested.

The soil on the plots to be planted to row crops is too dry to germinate the seed, and for that reason the planting is being postponed.

Maximum temperature, 96°; minimum, 48°; precipitation, 0.36 inch.

The total precipitation on the project for the month of May was 0.93 inch. The total precipitation on the project from October 1 to May 31, inclusive was 5.35 inches. This is the fourth lowest precipitation for that period in seventy-one years. The total precipitation from June to May inclusive is 13.90 inches.

GARDEN CITY:

June started out well this time, for 0.85 inch of rain fell on the first day. This will be of considerable benefit for row crop planting. The total precipitation from January to May, inclusive, was 1.95 inches below the 31-year average of 6.05 inches. No dust storms occurred during the week.

There will be very little wheat produced in this area this year. Most of the fields are brown except for a few green spots onto which water had drained. On a drive south of town it was noticed that several of the fields were striped, that is, there would be a strip of green wheat about a rod wide and then a burned strip of the same width. It was first thought that the field had possibly been strip listed or cultivated sometime before seeding to control soil blowing, and that the green areas were where the ground had been worked. But upon close observation it was found that the soil in the green areas was hard while that in the burned areas was loose and slightly higher, thus indicating that the burned areas were those which had been worked. The most logical explanation for these strips is that the ground was listed sometime before seeding to control soil blowing as stated before, and the furrows were filled with blow soil. The moisture did not penetrate this soil as well as the other, and also since it was raised slightly, some of the rain may have run off. Therefore the wheat burned sooner on the worked area than it did on the unworked.

Maximum temperature, 92°; minimum, 50°; precipitation, 0.85 inch.

TUCUMCARI:

Excellent progress has been made in station field work the past week. A shower of 0.46 inch prevented field work Monday, but was sufficient to place surface soil in excellent condition for final preparation and planting from Wednesday to the close of the week.

Since Wednesday morning approximately 54 acres of plot and increase land have been field cultivated, with 39 acres of this planted in plots immediately after cultivation. Prior to this week only cotton and peanuts had been planted. All rotation plots and the early plots of cooperative grain and forage sorghums, broomcorn, cowpeas, beans, and corn were planted during the past three days.

Precipitation for the year to date is exactly normal; but native grass, trees, shrubs, and weeds present a more healthy appearance than in several years at this time. Early row crops in the vicinity are very weedy, and it appears that fields early blank listed and still to be planted by splitting ridges may be sapped of moisture by weeds.

Visitors included L. H. Mitchell, project advisor of the Bureau of Reclamation. Addressing a public gathering in Tucumcari, Mr. Mitchell stressed the advisability of clearing and leveling irrigable land before the arrival of water and stated it was not too early for farmers to start this preliminary work.

Maximum temperature, 90°; minimum, 50°.

DALHART:

Except for land that was fall plowed or fallowed in 1938 the surface soil is too dry for seeding. Corn which was seeded the preceeding week emerged to stands on those preparations but showed no emergence on spring plowing and only partial emergence on the listed plots. The first date of planting of sorghum varieties was planted on June 1 in dry soil. No emergence can take place until moisture is received. No other planting is now contemplated until rain is received. Farmers report only spotted emergence for the most part of the fields that have been planted. Actually only a limited amount of the available acreage is being planted now because of the surface soil conditions.

Hugh G. Porterfield has been transferred from the Bushland, Texas Station of the SCS to the Stabilization Project of the SCS at Dalhart. His office headquarters are at the local dry-land station. Mr. Porterfield's work will consist of revegetation studies on the Sand Dune Area, helping the Dalhart, Stratford, Channing(Tex.), and Clayton (N. Mex.) Soil Conservation Service Projects on evaluation surveys and assisting on the outlying experimental grass plantings established by the Nursery Section. These latter plantings are to be made upon land purchased for retirement. Mr. Porterfield is with the Research Section of the SCS.

Maximum temperature, 88°; minimum, 49°; precipitation, none.

BIG SPRING:

Soil moisture conditions have improved considerably during the past week as a result of two rains totalling 1.94 inches. On the night of May 27 an inch and a half was received in less than an hour. This was somewhat lighter than in town a mile south. There a regular water spout was received which washed up pavement and flooded several business houses. On the night of June 2, 0.44 inch was received. While the moisture from these rains was welcomed, it will necessitate replanting of all cotton.

Cowpeas, broomcorn, and corn were planted in the rotations during the week. The cotton was all scratched in an effort to try to encourage emergence, but the last rain caused the soil to bake before the young plants could get through.

The cattle feeding experiment will be completed June 16, at which time a Feeder's Day meeting will be held.

Maximum temperature, 96°; minimum, 56°; precipitation, 1.94 inches.

LAWTON:

Moderate temperatures, a comparatively low wind velocity, and some rain during the past week made a beneficial contribution to farm operations.

Sorghum planted on May 29 emerged to good stands on the rotation plots and in the chinch bug sorghum resistant project by June 2. All row crops have been planted except the cooperative cotton project, and surface moisture and soil temperatures are conducive to rapid emergence.

All winter oats varieties except Winter Turf have been harvested, and several plots of oats in the spring seeding date and rate test were harvested June 2. Early Blackhull wheat was harvested on the same date, and a few other early maturing varieties are nearly ripe. A very limited amount of wheat is also being harvested within local trade territroy.

Local showers of 0.26 inch on May 31; 0.06 inch on June 1, and 0.36 inch on the 2nd were very timely for crops that had recently been planted. On the 2nd of June when only 0.36 inch was recorded on the station more than 2 inches fell within less than an hour in Lawton, approximately 1½ miles distant. A heavy rain fell on the chinch bug sorghum field which is near Lawton and some erosion occurred.

Mr. Bentley Yoakum, employed on the Crop Weather Research cotton project, and Messrs. Craine and Elling employed on the sorghum project reported for duty during the week. Mr. Harton and Mr. Floyd Miner are assisting Mr. R. G. Dahms, Station Entomologist, during the summer.

Mr. Arnold J. King and party from the Division of Crop and Livestock Estimates and the Statistical Laboratory at Ames, Iowa, called briefly at the station on the 3rd while making their wheat survey in this territory.

WOODWARD:

Hot dry weather continued the early part of the week but was broken by a shower of 0.72 inch on Thursday night. Wheat has continued to suffer but has been relieved materially by the shower and cooler weather. Varying amounts of precipitation from less than a quarter inch to several inches have been reported over a wide area in this part of the State.

Most of the work during the past week has been cultivating fields and plots in preparation for planting and getting machinery ready for harvest. A few plots in the Cereal project will likely be harvested during the coming week. Wheat on the D. L. A. project was planted later and is not so far advanced.

A wheat field day was held on June 3; an interested group of farmers attended.

Drs. K. S. Quisenberry and S. C. Salmon were station visitors during the week. O. R. Mathews left for Washington on May 28.

Maximum temperature, 93°; minimum, 54°; precipitation, 0.72 inch.

PENDLETON:

Dry weather still prevails in the Eastern Oregon and Washington sections, no rains of any value were received during the week. Thunderstorms over the mountains were of value to the rangelands. Relatively cool temperatures during the week cut down the rate of transpiration, a great help to the areas suffering from lack of rain. Much of the fall sown wheat in the drier areas is in immediate need of rain.

In the station area the fall sown wheat is about waist high and in good condition. The yields of winter wheat probably will not be as high as last year, although very fair yields will be obtained. Present indications are that spring wheat yields will be below those of winter wheat, cool weather and lack of rain during April and May checked the growth of the spring wheat. Spring barleys are fully headed, early sown spring wheat is beginning to head.

Visitors for the week included Roland McKee, M. A. Hein, and H. H. Rampton of the Forage Crops and Diseases, Washington, D. C.; Joe Belanger, S.C.S., Moro, Oregon; D. E. Stephens, Liason Officer, B.P.I. and S.C.S., Washington, D. C.; and M. M. Oveson, Supt. Experiment Station, Moro, Oregon.

Maximum temperature, 82°; minimum, 30°; precipitation, 0.05 inch.
10-year average precipitation, January 1 to May 31, 7.00 inches.
1939 precipitation, January 1 to May 31, 6.49 inches.

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REPORT FOR THE WEEK ENDING JUNE 10, 1939.

HAVRE:

The weather of the past week was typified by frequent showers and favorable growing temperatures. Precipitation since June 1 has totalled 0.73 inch, which is about normal. Condition of crops in general is quite good, although rains will be needed for continued growth.

Field work was frequently interrupted be showers, however, working roadways has been completed and flax and alfalfa varieties have been sown. The first cultivation of corn is in progress, some plots being quite weedy. The first cutting of alfalfa hay under irrigation was begun late in the week, the crop being further along than usual.

The beef cattle herd was moved to summer range in the Bear Paw mountains. Grass at higher elevations appears well advanced, and the short grass range is also making good growth under the influence of recent showers.

The barracks building has been occupied by various Farmers Union Junior groups, who will be in attendance during the entire month.

Maximum temperature, 74°; minimum, 40°; precipitation, 0.57 inch.

JUDITH BASIN:

The past week has been another with low temperatures, scattered rains, and very little wind. Weather conditions have prevented much work in the field other than duckfooting rotation roads and weeding plot alleys.

Corn has been slow in emerging due to the cold weather. Cutworms are in evidence on plots previously in stubble.

Cattle in the pasture trials were weighed, and gains of 3.5 to 3.7 pounds per day per animal were recorded. Bromegrass steers were just a bit lower than the crested wheatgrass or native grass lots.

Weeds are making a slow but steady growth and will need attention as soon as the weather becomes favorable.

Maximum temperature, 73°; minimum, 35°; precipitation, 0.70 inch.

HUNTLEY:

Rainfall during the week brought the precipitation for June, to date, to 3.18 inches or 1.02 inches above the average for the month, and the total since January 1 to within 0.13 inch of the average for the period January to June, inclusive. The showers coming as long, slow drizzles were soaked up by the soil of cultivated fields, and run-off occurred only on roadways and some sodlands.

Winter wheat which was somewhat stunted by the May drought is now fully headed on short straw, but the heads appear to be large and well formed. Spring-sown grains are growing slowly as a result of relatively low temperatures. Corn is backward and of poor color.

A start was made in cultivating corn and plowing fallows and rye for green manure, but rains interrupted these operations and it will probably be two or three days before the soil is again dry enough to work.

Maximum temperature, 89°; minimum, 39°; precipitation, 2.09 inches.

SHERIDAN:

Partly cloudy to cloudy weather prevailed over the entire week, with fairly low temperatures except on one day, the 4th. Temperatures did not rise as high as 70° F. over the last 4 days. Field work was interrupted by only one light shower.

All crops made good progress over the week. Sparton barley sown April 11, the earliest varieties of oats in the variety test, and some of the winter wheat in the bulk seedings, began to head late in the week. Some of the earliest sown spring wheat is in the boot. Sudan grass, millet, sorgo, and soybeans sown May 29 have begun to emerge. Alfalfa is beginning to bloom.

Seeding was completed, with the exception of some later dates-of-seeding some crops. Plots of rye for green manure, the fallow in the rotations, and some fallow in larger fields were plowed.

Maximum temperature, 90°; minimum, 41°; precipitation, 0.35 inch.

DICKINSON: (Report for the week ending June 3, 1939)

A further improvement in crop conditions resulted from the increase in moisture supply on four days during the week. Total in the four days was 1.56 inches. This increased the May precipitation to 3.57 inches. During the past three weeks the total precipitation was 4.01 inches.

Grains have grown rapidly and stands thickened by stooling. Grasses have grown rapidly. Where the stand of grass is thin, pastures are weedy.

Corn has not made much growth, but stands are generally good. Corn was harrowed. Part of the fallow plots were plowed, and green manure rye was turned under.

Blister beetles made their appearance, and hedges are being dusted with Dutox.

Maximum temperature, 90°; minimum, 39°; precipitation, 1.56 inches.

DICKINSON:

Rains during the week amounted to 0.87 inch. Since the middle of May the rainfall has amounted to 4.90 inches. Cool weather and ample moisture during most of the month has greatly improved the condition of all crops. Grains on the station now promise an average yield or better. Through the district grains on fallow, on spring plowing or on land which was one-way disked then packed and seeded immediately usually promise better than average yields. Many fields which were stubbled in are so weedy or have been so badly damaged by grasshoppers that nothing will be harvested.

Adjustment for insurance under the F.C.T.C. of abandoned grain fields was started in the county during the week.

Corn and potatoes on the rotations were cultivated for the first time. Plowing of fallow on the rotations was completed after some delay by wet weather. Trees were cultivated and weeds hoed out of the rows.

Crested wheatgrass and bromegrass are nearly fully headed. These grasses and most others are not quite so tall as in 1938, although stands are good and yields could exceed those harvested last year.

Poisoning of grasshoppers was continued. At present little damage is being done on the station although quite a few hoppers remain in places. Crops and weeds are thick and tall enough so that poisoning is difficult. Hoppers are still thick enough in places in the area so that a later migration may do serious damage. Most of the area now has had good rains, so the fresh vegetation may prevent migrations.

Maximum temperature, 80°; minimum, 38°; precipitation, 0.87 inch. Precipitation to date in June, 2.00 inches. Precipitation to date in 1939, 8.08 inches.

MANDAN:

Agronomy - The week was mostly cool and cloudy, with 0.22 inch precipitation at the end. The fore part of the week was characterized by almost sultry atmospheric conditions, though the highest temperature was only 87° F.

All corn and potatoes were cultivated during the week, and plowing for fallow and green manure was finished. Some grass seeding was done in Field P. Corn thinning is about completed.

Millet and sorghum varieties planted the last of May and first of June, showed good emergence on the 8th.

Growth conditions now are almost ideal. Grasses and grains which three weeks ago appeared to be on "last legs" have made a fine recovery and with normal rainfall from now on should make good progress.

Maximum temperature, 87°; minimum, 44°; precipitation, 0.22 inch.

Horticulture - Nursery stock and orchards have been making a good growth during the week. Plums have been thinned from trees where the set of fruit was excessive. Aphids are beginning to be noticed on some varieties of plums.

Budded stock in the nursery has been staked and tied. Softwood cuttings have been made, most of them being gooseberries and currants for fruit cooperators. Cultivating and hoeing have been in progress during most of the week.

Replanting of tomatoes in the variety test block was done early in the week. Twenty two varieties, strains, and selections mostly from the North Dakota State College, are being tested for drought resistance, yield, and quality this year.

A good stand of all varieties in the acre garden has now been obtained. The season of most will be later than normal, due to belated germination. Striped gophers are very numerous this year and are causing some damage, especially to cucumbers, melons, and late planted corn.

Lawns about the station grounds are now fully recovered and in very good condition. Roads, shrubbery, and tree groups are being hoed. Hybrid rugosa roses and peonies in assortment are now at their best and attracting considerable attention from the general public. Peony varieties such as Festiva maxima, Le Cygue Therese, and Longfellow are especially good this year. Other perennials in bloom at the present time are Hemerocallis doumortieri, Pyrethrum roseum, Aquilegia, and Lilium elegans.

Arboriculture - Cultivation and hoeing of weeds has been carried on the entire week. Two fields have been replanted to American and Chinese elm seed. Rapid growth is now being made by trees and seedlings. Blister beetles are extremely harmful on Siberian pea-tree and honey locust seedlings, particularly the latter, where over half of the seedlings have been eaten off down to the ground line.

BELLE FOURCHE:

The long drought which has prevailed for over a year was finally broken on June 9 by a steady, soaking rain of 1.09 inches. This was the first beneficial amount of precipitation recieved since May 31, 1938, and it was the largest amount recorded in a single storm since September 5, 1937. The rain will be of great value to all vegetation, and it was practically a life saver to many stock men and farmers on both irrigated and non-irrigated land. A limited amount of stock had already been sold because of lack of grass on ranges and pastures, and a heavy movement of stock to market would have occurred within a few weeks.

Young sweetclover which emerged on the rotation plots early in the spring, has burned so badly that it is doubtful if it will be able to recover. Considerable spring grain germinated following the showers on May 23 and June 1, and the heavy rain arrived just in time to save this grain, as the soil had become quite dry. Some of the grain undoubtedly germinated and then dried to such an extent that it will be unable to recover, but most of the seed was too deep to be affected by the light rains, and fair stands should eventually be obtained on the various plots. Potatoes were planted early in the week, but planting of sorgo was postponed because of the dry condition of the soil.

Visitors included Director I. B. Johnson, South Dakota Experiment Station, Brookings; and D. A. Spencer, Bureau of Animal Industry, Washington, D. C.

Maximum temperature, 95°; minimum, 42°; precipitation, 1.09 inches.

ARCHER:

The weather was warm and dry during the first half of the week but cool during the last half. High, cool winds during the afternoon of June 9 caused considerable damage. The average wind velocity during the afternoon was 25.36 m.p.h. Leaves and small twigs were whipped from the trees, and some of the tender shoots were severely injured. Corn and peas also suffered some injury.

Due to drought 20 acres of winter wheat are being cut for hay, and a start was made at cutting the grass, alfalfa, and clover in the experimental field. Because of wind this work was stopped and the farm crew was put to thinning corn in the rotation plots. The ten acres of rye cut last week was stacked, yielding at the rate of 2468 pounds of hay per acre.

Director W. L. Quayle visited the station June 7.

Maximum temperature, 89°; minimum, 37°; precipitation, trace.

NORTH PLATTE:

Moderately high temperatures were accompanied by high wind on Sunday and Monday. A light shower fell during Thursday night, and Friday and Saturday were cloudy and cool. The small grain is in a critical condition. A good rain would nearly assure a good crop, but a couple of days of hot wind would cause a near failure. Weather conditions have been adverse for rust this spring, and to date no pustules have been found. The winter wheat is filled, but the leaves are drying up; oats look good especially on fallow; but the spring wheat and barley are slow in heading.

The corn received its first cultivation during the week, and thinning is in progress. The corn has been growing rapidly, and stands are nearly perfect. Early Kalo has been surface planted with a corn planter in the DLA plots. The field peas and sweetclover growing on the green manure plots have produced a good cover, and were plowed under Saturday. Plowing of the fallow plots is in progress.

The war on grasshoppers continues. The poison bran seems to be quite effective in reducing the numbers of these pests. There are very few hoppers in the places where poison has been spread in comparison to the numbers first found in these areas.

The annual field crops day has been scheduled for June 22.

AKRON:

The week was generally favorable for field work. Forage and grain sorghum nursery and variety experiments were seeded the first of the week, rotation kafir plots Thursday, rate and spacing project plots with the exception of the potatoes, Friday. Hybrid corn variety experiment was cultivated, and a start was made toward thinning to uniform stands. The hoeing of the cereal nursery war completed.

Friday brought a hard, driving northwest wind, which by afternoon was bringing silt from off the sandy land corn fields lying in that direction from the station. A trip to Sterling Saturday afternoon through this section revealed probably 10 percent of the corn acreage covered beyond the ability of the plants to emerge. Pasture lands in this section appear to be literally alive with grasshoppers. They are also again numerous on the station grounds, and the second lot of 600 pounds of poison bait was scattered.

Rotation corn and forage sorghums emerged to satisfactory stands during the week. Barley and oats, now fully headed, have not increased much in height since the recent rains, and the harvesting of certain plots now promises to be by mower with buncher attachment.

W. J. Henderson, Extension Pathologist, and Charles Giles, local County Extension Agent supervised the seeding of a sorghum seed treatment for smut control experiment Monday. T. G. Stewart, Rodney Tucker, D. W. Robertson, and J. J. Curtis came from Fort Collins Monday to discuss plans for a field day. They brought James Kern, an advanced undergraduate student who will be stationed here during the cropping season.

Maximum temperature, 96°; minimum, 43°; precipitation, 0.06 inch.

COLBY:

This was another week of very variable weather. It has showered three nights and drying winds prevailed almost every day. Nearly every day there is a period when it gets dusty with more or less soil blowing. There was no hail near Colby, but several localities in this section of the State have been visited by destructive hail storms. The showers have been of a local nature and were much heavier in some parts of the county than here.

Winter wheat seems to be holding its own. It is all headed and filling rapidly. In many cases the grains were almost fully formed by the time a field was completely headed. Even the thin fields look fairly promising, as the weeds are not developing as much as usual in thin fields. The spring small grains are rather uneven. Pastures are beginning to turn brown, except where the showers have been exceptionally heavy.

The corn of the plots is up to good stands and is being thinned. The sorghums plots were planted the first of the week. There was an abundance of moisture in the soil so that germination should be fairly prompt.

Grasshoppers are very thick and growing fast. So far poisoning has not been very effective. Rabbits are abundant and are eating patches in some of the plots and in small grain fields.

Maximum temperature, 100°; minimum, 50°; precipitation, 0.14 inch.

HAYS:

During the week the drought was interrupted by local showers on four different days of which the heaviest recorded on the experiment station was 0.18 inch. During this period various vicinities within the county have received much heavier rains ranging up to 2 inches. These, however, have been extremely local in area and some have been accompanied with heavy hail. A destructive hail storm was reported extending from the village of Schoenchen west and south for a short distance. Also another streak of hail was reported west of Lebenthal.

The showers during the week on the experiment station have caused little effect on crop prospects. The high temperatures and wind during the first part of the week hastened the development and drying-up of the wheat, but little change has been noted the last three days. Where grain has been formed the wheat is in the soft-dough stage. Barley is in about the same stage. Oats are almost as far advanced.

The surface soil is still too dry for successful planting and germination of row and feed crops. Pastures are getting dryer and browner each week. The Fort Hays Experiment Station has rented pasture in eastern Kansas for 107 head of cattle which were removed from our pastures this week.

The grasshopper population is increasing very rapidly. During the week over a ton of poison bran mash has been spread over the experiment station including a complete coverage of the Dry Land Project and portions of the adjoining fields.

Maximum temperature, 106°; minimum, 51°; precipitation, 0.39 inch.

GARDEN CITY:

No precipitation was received this week, and there were several days of rather high winds and temperatures. These factors have hastened the ripening of what wheat there is in this section and some farmers may start cutting the latter part of next week. There will be only a few, if any, of the wheat plots on D.L.A. harvested this year.

Row crops were planted this week in a moist surface soil and should come up to a good stand. Soil samples were taken at seeding time.

Two dust storms occurred during the week, one was rather mild but the other was termed "bad". It rolled in from the northwest Friday night, and the most severe part lasted about one and one-half hours.

Station visitors were D. A. Wilbur, Assistant Professor of Entomology, Kansas State College; J. E. Smith, Soil Conservation Service, Amarillo, Texas; C. M. Taylor and Glen Railsback, Soil Conservation Service, Liberal, Kansas; and Bob Fort, Soil Conservation Service, Garden City Kansas.

Maximum temperature, 101°; minimum, 49°; precipitation, none.

TUCUMCARI:

Comparatively hot, dry, windy weather has predominated the past week, and no station planting was attempted. On May 28 there was received 0.46 inch precipitation, just enough to permit planting for three days. Crops planted May 31 - June 2 have emerged to good stands but require rain for rapid growth.

Grasshoppers are still a very serious problem in this locality, but it is hoped the remnants will be cleaned up the coming week. They are numerous within a mile of the station but have not appeared in numbers on any portion of the station.

Ranges are drying fast and the very favorable conditions of a month ago are fast diminishing. Wheat on the plains will be spotted and no doubt most of the crop will be very light, both in yield and test weight.

As soon as possible after rain occurs, the second date of station cooperative plots and increase land will be planted.

Maximum temperature, 101°; minimum, 54°; precipitation, none.

DALHART:

Corn varieties were planted on the first day of the week in soil that was too dry apparently for good emergence. Following that the sorghum varieties were planted on fallow. These varieties on fallow are showing emergence this afternoon, and it appears that there will be only occasional short skips. Peanut rotations were also planted. Except for the plot on fallow no emergence is expected prior to a rain. The corn rotation and tillage plots of corn on fall plowing and on fallow were thinned. Emergence from any other tillage treatments are not possible because of the dry surface soil.

The summer tilled plots were plowed. This is about a week ahead of the usual fallow tillage operation, but a few of the plots were becoming dry where more than the usual number of Russian thistles were growing. Farm work in this section is at a standstill until moisture is received. During the past 60 days a total of 0.71 of an inch has been received in 9 rains.

Opportunity is now afforded, and one of the station residence yards is being levelled in the expectation that grass may again be established.

Trees show the densest leaf growth that they have since 1932. They have not started to show moisture shortage.

For a while Friday afternoon with the temperature at 98° this area was probably near the center of a low pressure area. At the time for the 5 p.m. humidity reading the relative humidity was 6.

Maximum temperature, 98°; minimum, 48°; precipitation, trace.

BIG SPRING:

The hottest temperature of the year, 107°, was registered June 9. The high winds in connection with these high temperatures are drying the soil out rapidly. The June 1 date of sorghums has emerged to good stands as has also the broomcorn and kafir, which were planted the first of the week. Milo plots in the rotations, which were planted June 6, are just starting to show. Cotton spacing and some plots in the rotations were replanted the first of the week, but the present weather conditions are going to make it rather difficult to obtain uniform stands on these plots.

The winter wheat plots were harvested this week, but the straw was so short that it was necessary to use a mower instead of a binder. Yields on all plots will be very light.

Other work during the week has consisted of planting increase Sudan grass, hegari, and milo.

Maximum temperature, 107°; minimum, 62°; precipitation, none.

LAWTON:

Wheat and oats ripened rapidly during the past week of hot, windy weather. Cotton and sorghum seedlings and corn that is showing an appreciable number of tassels wilted badly on the 9th when a maximum temperature of 106° was accompanied by a south wind that averaged 12.3 miles per hour for the 24-hour period. Temperatures were cooler on the 10th, but the wind blew from the north at an average of 13 miles per hour during the daylight period.

All row crops have been harrowed or rotary hoed and considerable harvesting has been done. Practically all small grains are ripe, and harvest will soon be completed if a high wind velocity does not interfere too seriously. The short straw and thin stands provide a difficult harvest.

The cooperative cotton project was planted June 6. Mr. J. J. Morgan, Division of Crop and Livestock Estimates, spent several days at the station setting up weather instruments and apparatus in connection with the crop-weather research cotton project.

WOODWARD:

This has been a week of extremes. Maximum temperature ranged from 80° to 101°. The minimum temperature was 58°. Five of the seven days during the week the average wind velocity averaged above 8 miles an hour with an average of 11.4 on one day. On the night of the seventh 0.43 inch precipitation was received.

As usual, harvest of small grains and planting of grain sorghums are overlapping. Wheat has ripened rapidly, and most of the plots on the Cereal Project were combined on the 7th. Mr. Hubbard reports that yields probably will not average quite as high as in 1938, but the yields of several plots will probably be about 50 bushels an acre. Fields of kafir for seed production were planted early in the week. Conditions for emergence were ideal, and a few plants were showing within 76 hours after planting.

Mrs. Frances Tetzlaff-Radford, clerk stenographer at the station, died on June 4 as a result of an automobile accident which occurred about 25 miles east of Woodward as she was returning from a short vacation.

PENDLETON:

Moderate temperatures prevailed throughout the week. Winter wheat is beginning to color up and spring wheat made very rapid growth during the week. Three showers totalling 0.29 inch fell on successive days. These showers were of very little value to growing crops.

Harvest of canning peas started this week and the majority of the pea growers will start harvest next week. The harvest season will last about fifty days, the growers planting at different dates and elevations are able to extend the harvest season over a rather long period.

On the station the work during the week consisted mainly of rod-weeding fallow and rogueing out mixtures in rotation and tillage plots. Grain sorghums sown on May 22 are emerging with very good stands.

Visitors were Dr. F. E. Clements, Carnegie Institute, Washington, D. C.; D. E. Stephens, Liason Officier, S.C.S. and B.P.I., Washington, D. C.; J. H. Christ, Regional Conservator, S.C.S., Spokane, Washington; and V. B. Hawk, S.C.S., Pullman, Washington.

Maximum temperature, 73°; minimum, 40°; precipitation, 0.29 inch.

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REPORT FOR THE WEEK ENDING JUNE 17, 1939.

HAVRE:

Measurable precipitation, attended by cool weather, was recorded every day during the week, a total of 1.57 inches being received without appreciable run-off. Most crops are now in good condition, with the possible exception of corn, sorgo, and sudan grass, which need warmer weather.

Aside from two or three brief intervals, field work was impossible. Cereal and grass nurseries, however, were trimmed and some hand weeding was accomplished. Weeds in row crops are making rapid growth. Haying has been further delayed by daily rains, however, the outlook for feed, pasture, and irrigation water supply is excellent.

The beef cows were divided into four breeding herds and placed in separate pastures. Bulls also arrived from the State College for use in these respective herds.

Visitors included Dr. R. T. Clark, and J. M. Cummings of the Animal Husbandry Department, Montana Experiment Station.

Maximum temperature, 74°; minimum, 41°; precipitation, 1.57 inches.

JUDITH BASIN:

Weather continues to be cold and wet. Precipitation has been received on ten consecutive days and on all but three of the past eighteen days.

Some work has been done in the field, such as trimming and hoeing alleys and cultivating grass rows.

Frosted wheat has been reported in some areas this week. This wheat, no doubt, was injured about the first of the month, but it is just now becoming noticeable to growers.

Gordon Thompson and Vernon Frasier, student assistants from the Montana State College, reported this week for work during the summer. Drs. R. H. Bamberg and A. M. Schlehuber of Bozeman were visitors on Thursday and Friday.

Maximum temperature, 71°; minimum, 38°; precipitation, 1.17 inches.

HUNTLEY:

Soil and weather conditions permitted a resumption of field work by midweek, but a soaking rain Friday night again stopped operations for the time being. Precipitation so far in June amounts to 4.80 inches, and for the month May 16 to June 16, 6.83 inches. This is 2.67 inches above the average precipitation for the months of May and June combined.

Owing to the cool weather, crops continue to make a rather slow growth, but all plantings seem to have fully recovered from the drought conditions apparent a month ago. Winter wheat, rye, and crested wheatgrass are now fully headed, and a few heads are appearing on early varieties of barley. On all spring-plowed land two distinct plant ages are present. Plants from seed which germinated soon after sowing are tall and approaching the heading stage, whereas seedlings which have emerged since the rains started are only 1 to 4 inches tall.

Field work during the week included plowing under rye and sweetclover for green manure, plowing fallow plots, cultivating roads and alleys, and a start in cultivating row crops. Soil samples taken early in the week indicated available moisture in spring wheat plots to be well into the third foot. Hogs on pastures were weighed, with good gains recorded for all lots. The abundance of moisture has stimulated continuous new growth in the winter rye pasture, which has improved the palatability and carrying capacity of that forage.

Maximum temperature, 74°; minimum, 45°; precipitation, 1.63 inches.

SHERIDAN:

Cloudy weather prevailed over the week, with several light showers. Temperatures ranged somewhat higher than last week, but still continued below normal, and there was considerable wind for this section.

Crop growth generally continued good. Spring grain in some location has made an exceptionally heavy growth and probably will require considerably more moisture than is now available in order to make a crop. Winter wheat in the rotations is now heading, just a few days earlier than last year. Early seedings of spring wheat also are heading. Sudan grass sown the 7th has emerged with a good stand, with sorgo sown at the same time emerging about a day later, while grain sorghum varieties sown at the same time are just beginning to emerge.

Plowing for fallow and green manure was completed, and the rotation fallow disked. The furrow slice was still quite moist, even where vegetative growth was quite heavy, excepting where Bromus tectorum was heavy. There it was quite dry and hard.

W. L. Quayle was at the station the 15th.

Maximum temperature, 81°; minimum, 46°; precipitation, 0.74 inch.

DICKINSON:

Cool, cloudy or rainy weather has persisted throughout the week. Only a part of one day was clear. The atmosphere has been saturated with moisture most of the time. Rain on five days amounted to 1.70 inches. This brings the June precipitation to 3.70 inches. Since May 17 6.60 inches of precipitation was recorded.

Sunshine and warmer weather would now benefit all crops. Grains and grasses lodged some in low places in the heavy rain of the night of the 15th. Corn and other warm season crops have made little growth during the week.

Cultivating and weeding of trees and row crops was continued. Field peas and sweetclover in the green-manure rotations were plowed under. Field peas made the best growth during recent years, but the stand of sweetclover was so thin that only a light growth was plowed under.

Maximum temperature, 69°; minimum, 38°; precipitation, 3.70 inches. Precipitation to date in 1939, 9.78 inches.

MANDAN:

Agronomy - The week was characterized by unseasonably low temperatures, well distributed rains, and overcast skies. On the night of the 15-16th 0.98 inch of rain fell during a period of 13-14 hours. There was practically no run-off. Grain crops continue to make excellent growth, but corn and sorghum need sunshine and warmth.

aying operations were started the first of the week, but conditions have been decidedly against proper curing and putting up. Grass everywhere has made a remarkable recovery, and without doubt there will be a good crop.

The month of June so far brings to remind the possibility of a recurr nce of such seasons as 1914 and 1915, when the heaviest crops were produced.

Maximum temperature, 75°; minimum, 37°; precipitation, 1.10 inches.

Horticulture - Hoeing of groups and borders about the station grounds was in progress most of the week and was completed Friday. Older plantings are looking much refreshed since the rain, but the precipitation came too late to save most of the replants, young seedlings, mostly of conifers, set out in early spring. A very poor stand of these was obtained.

The annual June pruning of shade trees and shrubs was begun the latter part of the week and will be in progress for some time.

Late varieties of peonies, mock oranges, and hybrid rugosa roses are the only ornamentals in bloom on the station grounds at the present time.

Cultivation and hoeing were in progress in the fruit orchards throughout the week. Recent rains have encouraged the rapid growth of weeds.

Arboriculture - Cultivation and hoeing in nursery fields and tree plantings have been carried on during weather favorable for such work. Very little growth is being made by seedlings at the present time, but warmer weather will result in rapid progress with the now favorable moisture conditions. Blister beetles continue heavy defoliation on Siberian pea-tree seedlings.

BELLE FOURCHE:

Cool, unsettled weather prevailed throughout the week, and showers were of frequent occurrence. Precipitation was recorded every day, but with the exception of 0.58 inch received the evening of June 16, the daily amounts were small, ranging from a trace to 0.20 inch. A little over 2 inches precipitation have been recorded in the past 10 days, but moisture has penetrated the soil to a depth of only 8 to 10 inches.

Small grain and corn are coming up and good stands apparently will be obtained. Small grain plots present an uneven appearance, owing to varying amounts of grain emerging at four different dates, the earliest being May 13 and the latest June 18. Grass is recovering rapidly, but about 50 percent of the alfalfa in the rotations failed to survive. Most of the young sweetclover which came up early in the spring has been unable to recover, but sweetclover seeded later with nurse crops is emerging with fair stands.

The soil has been too wet most of the week to permit work in the field. Sorgo plots were duckfooted, harrowed, and planted, and alfalfa was reseeded on rotation plots.

Maximum temperature, 77°; minimum, 42°; precipitation, 1.00 inch.

ARCHER:

The outstanding weather feature during the week was a hail storm which occurred between 3:30 and 4:00 p.m. on June 15. A considerable portion of the hail stones were large, many the size of hen eggs. There was but little wind, therefore crop damage was not as severe as might be expected from a storm totalling 1.03 inches precipitation, most of which was in the form of hail. The hail stones killed one

station lamb and injured several others. They also caused blood blotches on the backs of some of the cows and ewes.

Other than beans, which had emerged, spring crops will survive most of the storm damage. About 10 to 15 percent of the winter wheat was knocked down. But little run-off occurred except from the roadways in the experimental field.

All hay from the experimental field had been weighed and stored before the hail storm. The remainder of the winter wheat in the dairy field is being cut for hay.

Kenneth Fiero, Norman French, Fred Olson, Wallace Eder, Howard Millsap, and A. D. Ellison of the Soil Conservation Service, and Frederick C. Clements of the Carnegie Foundation were station visitors.

Maximum temperature, 88°; minimum, 41°; precipitation, 1.04 inches.

NORTH PLATTE:

The first part of the week was cool and cloudy. A good shower fell Tuesday afternoon. Over half an inch fell in about 15 minutes, but there was little run-off from the plots. This moisture will help to mature the small grain normally. The last three days of the week were quite warm, and on Saturday the temperature reached the 100° mark. A hot wind accompanied the high temperature on Saturday. The oats and winter wheat are ripening rapidly, and harvest will start within a few days.

The plowing of the fallow plots was completed during the week, and the corn has been thinned. The roadways were bladed, and grass and weeds mowed in preparation for field day.

The grasshoppers have reached their migration stage, and poisoning in local areas is not so effective. These pests are much more numerous on the bench than during the past few years.

Maximum temperature, 104°; minimum, 45°; precipitation, 0.64 inch.

AKRON:

Strong to high winds predominantly from the south and southeast made the week generally miserable. According to available news reports, very little rain fell in any part of northeastern Colorado. The soil moisture conditions under crops with great moisture need is again becoming serious. Barley, oats, and winter wheat are ripening prematurely. The yield promises to be fair on fallow, and in some sections on other preparations, but the quality and bushel weight will suffer as in immediately previous years. Spring wheat on most of the cultural plots has burned brown without heading. On the very best of the plots it is too thin and short to cover the ground. Sorghum nursery and the variety experiments have emerged, but probably not better than 80 percent on the latter which was seeded two days later. Rotation kafir plots seeded the 8th show satisfactory stands on all seedings except the listed plots where it is only now struggling through.

Green manure peas and rye were plowed about the middle of the week. Rye plots had been reseeded to the spring variety. Cover was thin and short on each type. Current date seedings of millet and beans were accomplished. General forage variety series was seeded to Sudan grass with a prospect for prompt emergence. Ten acres of land across the railroad was also row seeded to Sudan grass for prospective horse roughage feed.

Current June to date has produced only 0.35 inch of its expected average of 2.36 inches.

Professor D. C. Tingey of the Utah State College called during the week, on his way back from the University of Minnesota, to inspect the station crops and to renew acquaintance with his former student, Mr. Horace Smith.

Maximum temperature, 98°; minimum, 40°; precipitation, 0.02 inch.

COLBY:

This has been about the most disagreeable week of the year. It has been very windy and very dusty for this time of year. The last two days have been unusually hot, with a hot wind burning the pastures and small grain crops. Precipitation was recorded on three days, but the total was only 0.11 inch. In the north and south parts of this county the precipitation was considerably heavier. Where the fallow fields have not been worked recently there has been some soil blowing.

Barley, oats, and spring wheat are short and are drying up fast. They started filling nicely, but are about out of moisture and will undoubtedly shrivel in this heat. The winter wheat is somewhat better filled, but will probably shrivel also. From present appearances harvest with headers and binders will be on this coming week. Grasshoppers are very thick everywhere, in spite of frequent poisoning, and are beginning to cut the heads of barley and oats.

Excellent stands were obtained on all the sorghum plots, except M.C. A milo and M.C. A kafir. On these plots the seedbed dried out before much of the seed germinated.

The June-plowed fallows were plowed this week. Where they had not been worked previously there was a rather rank growth of thistles, and the ground was only fairly moist. Those that had been onewayed earlier were practically free from weeds, and the ground was wet. The peas were turned under. The vines were about 16 inches high, and some pods were forming. They started wilting considerably early in the week. The ground was dry and turned up mostly cloddy.

Maximum temperature, 101°; minimum, 43°; precipitation, 0.11 inch.

HAYS:

The most important event of the week was a rain of 1.47 inches on the night of the 13th. Although a small portion of this fell rapidly, most of it was absorbed by the ground. This rain came too late to be of benefit to the small grain crops, but it was of inestimable value for row and feed crops. The small acreages of these crops that were planted early and had emerged are now making good growth. However, most of the land was so dry on the surface that planting had not been done. The rain improved the soil conditions to such an extent that all plantings now being made are going in under ideal condition.

The half dozen barley plots that were tall enough to cut were harvested the first part of the week. The straw was too short for binding. It was cut, however, with a binder and the loose straw put in piles. Oats are still a little too green to be harvested. This crop is so short that any plots that are harvested will need to be mowed and raked. Winter wheat is for most part in the hard-dough stage but there are still many heads not out of the soft-dough stage.

Within the county a few headers have been started in the wheat fields where they are harvesting only the best portions of the field.

All row crop plots on the projects were planted the 16th.

Maximum temperature, 105°; minimum, 46°; precipitation, 1.52 inches.

GARDEN CITY:

Two light showers fell the first part of the week, which totaled 0.25 inch. The last four days were hot, dry, and dusty. Evaporation was excessive on these days and the soil dried out rapidly.

Contrary to expectations, the row crops came up to a thin stand, particularly the milo and kafir. This was probably due to uneven depth of covering, and the soil dried out before the seed germinated. The skips were replanted by hand.

Field work consisted of cultivating and splitting ridges to control weeds. Moisture samples were taken from some of the milo plots.

Station visitors were Dr. Charles Whitfield, Soil Conservation Service, Amarillo, Texas; Louis Moberly, Soil Conservation Service, Liberal, Kansas; L. L. Compton, Extension Agronomist and John Ferguson, Extension Engineer from Kansas State College.

Maximum temperature, 107°; minimum, 56°; precipitation, 0.25 inch.

TUCUMCARI:

Extremely high temperatures and hot drying winds have severely injured crops and ranges the past week. At the close of May, precipitation for the year was normal and prospects were favorable, but very rapid deterioration has occurred since that date.

A maximum reading of 108° on June 14 tied the all-time record, set July 14, 1918. Evaporation of 0.702 inch that day broke all records. Evaporation for the first 15 days of June totaled 6.738 inches. There has been no precipitation this month.

Station crops planted the first three days in June emerged to good stands but have made little growth. Many seedlings have died the past week. No further planting will be attempted until rain occurs. Early wheat on the plains is ready for harvest. Late wheat was severely injured by the hot, dry weather of the past two weeks, and many fields which apparently could make approximately average yields will not be worth cutting.

Maximum temperature, 108°; minimum, 58°; precipitation, none.

DALHART:

This was easily the most discouraging week of the current seven years' drought. The evening of the 13th after considerable wind and threatening weather a rain which totaled 0.55 of an inch was received. This amount of moisture is just above the half inch which is normally considered the minimum rainfall for planting. Several large limbs were torn from trees on the station. The strongest part of the wind was apparently about 3 miles southwest, as several small buildings were destroyed and a few telegraph poles were broken. Hopes were raised in anticipation of planting on this moisture, and all plowed land was harrowed starting the next morning. However the temperature the next day reached 103° as it did also on the 15th. These high temperatures, never before has the temperatures reached this maximum so early in the season, were accompanied by high winds and a low humidity. The result was that the

maximum penetration of the rain was 3 inches, and with the excessive heat and high winds planting was not advisable. While the temperature Friday was only 99° and at noon to-day the temperature was not as high as the day before, the high winds have continued. These high, hot winds with the visibility ranging from 50 to 100 yards at times, and with less visibility in the west field, are certainly depressing.

The field south of the station which had not bothered so very much for a couple of years is again a torment. This area was dry disked to kill weeds the middle of May.

One area, rather limited in extent, received sufficient rainfall to warrant planting. Most farmers in these two counties are either unable to plant or unable to save what they have planted.

Maximum temperature, 103°; minimum, 52°; precipitation, 0.55 inch.

BIG SPRING:

Weather during the past week has continued exceptionally hot and dry. With the exception of one day, the maximum temperature ranged between 100° and 107°. Considerable wind accompanied these high temperatures, which caused excessive evaporation.

Many farmers are reporting young cotton dying and others are still waiting for sufficient moisture to plant. With the exception of some late planted plots, all station planting was completed during the week. This consisted mainly of the June 15 date of sorghums and an increase field of Sumac. There seemed to be sufficient moisture for emergence if these hot winds do not dry the soil out before germination. The May 15 date of sorghums was thinned during the week and is apparently making a good growth.

The cattle feeding experiments were completed on June 14 and a Feeders Day Meeting was held June 16. There were about 300 farmers and ranch men in attendance, and all seemed to show considerable interest in the problems discussed. The local Chamber of Commerce served lunch at noon. Those contributing to the program were representatives from the Bureau of Animal Industry, Washington, D. C., and members of the Texas Experiment Station and Extension Service, of A. & M College.

Among visitors here for the occasion were Dr. Paul Howe, Assistant Chief of the Bureau of Animal Industry and W. H. Black in charge of Beef Cattle Investigations of the same Bureau, both of Washington, D. C.; J. M. Jones and John H. Jones of the Texas Experiment Station; Geo. Barnes and E. W. Tudaley of the Extension Service of A. & M. and J. D. Pruitt, District County Agent.

Maximum temperature, 107°; minimum, 68°; precipitation, none.

LAWTON:

A rain of 1.13 inches that fell gently on the 11th was followed by one day of cool, cloudy weather. Maximum temperatures on subsequent days ranged from 93° to 103°, and a high wind velocity has prevailed.

Crop prospects continue to be discouraging. Cotton and feed crops have in most instances been replanted late. High winds, high temperatures, a scant supply of soil moisture, and insect damage-grasshoppers and chinch bugs constitute a combination of hazards that is likely to be disastrous. Grasshopper damage is sharply localized, and only a limited amount of poisoned bait has been used. Chinch bug injury is unusually widespread and generally very severe. Present indications are that chinch bugs will be largely responsible for a pretty general

corn failure in this territory this year. Heavy infestations of chinch bugs in sandy soils is rather unusual, but corn and sorghums are suffering intense injury where such damage is seldom experienced. As a rule most of the fields are planted on or adjacent to wheat or barley land where the crop failed. In sandy soils the bugs appear to have migrated from oats fields. In past years oats have not been considered as an important host for this insect.

Injury is already in the sorghum breeding project. On the rotation plots, kafir is making a good growth, but feterita is growing slowly.

Sorghum thinning is pretty well completed in the 14-acre breeding project and the rotation plots will be thinned within a day or two. Tractors and teams have been steadily engaged in cultivating, harrowing, listing, and plowing throughout the week. Harvest of small grains, made very difficult by high winds, short, weak straw, and thin stands was finally completed on the 13th. Several plots of wheat and the spring barley plots were cut with a mower with a bunching attachment.

WOODWARD:

A rain of 0.81 inch falling within a few minutes, accompanied by a driving wind did considerable damage both at the station and in the surrounding territory. Three or four men working all of one day cutting out broken branches and hauling brush did not get more than about half through cleaning up the damage on the station. Besides breaking up trees, this storm necessitates replanting one entire field of kafir and patching the barn roof. In some way enough shingles were removed from the roof so that it took over two bundles to patch the hole. The wind accompanying this storm wrecked numerous windmills, wind-chargers, barns, and numerous small buildings besides uprooting a number of large trees over the surrounding territory. Heavy hail storms were also reported from one or two places, and considerable damage to wheat was reported in some localities.

Wheat harvest and planting of row crops has gone forward during the week. Wheat is turning out better than expected yields.

Harvest is in full swing in the territory from here east. On a trip to Stillwater early in the week, it was noted that many fields had been cut with a binder, combining had been started later.

The latter part of the week has been very windy, with temperatures ranging above 100°. From 8:00 a.m. June 14, to the same time on the 17th, the wind velocity has averaged 14.2 miles per hour with little indication of its stopping soon. There has not been a 3-day period in any June since 1929 with as high wind velocity. This has necessitated cultivation of practically all the unplanted areas on the station to control soil movement.

Maximum temperature, 103°; minimum, 56°; precipitation, 0.84 inch.

PENDLETON:

Cool, cloudy, and unsettled weather prevailed practically all week. A rain of 0.24 inch fell on June 16. The winter wheat is beginning to take on a golden color, indicating normal ripening. In some of the drier sections the wheat harvest will probably start about July 5. Drought conditions are quite severe in most of the counties to the west, the spring grains have not had any rains since planting. Winter wheat in these drought sections still looks very fair considering the lack of rain, about a month ago there was less than a half inch available water left in the soil.

Station work consisted of rogueing out mixtures, rod weeding fallow, and cultivating corn.

Visitors were Max M. Hoover, S.C.S., Washington, D. C.; A. L. Hafenrichter and V. B. Hawk, S.C.S., Pullman, Washington; H. Jacobsen, Experiment Station, Lethbridge, Alberta, Canada; and C. I. Seely, Superintendent, Weed Station, Genesee, Idaho.

Maximum temperature, 83°; minimum, 36°; precipitation, 0.24 inch.

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JUN 24 1939

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REPORT FOR THE WEEK ENDING JUNE 24, 1939.

HAVRE:

Showers continued, precipitation thus far in June amounting to 3.76 inches, rain having occurred on 19 days. Cool temperatures also have prevailed during the entire month, and conditions in general are now highly favorable for cereals, grass, and alfalfa.

Field work was only possible on parts of several days, cultivation of corn, beans, potatoes, and other row plantings progressing slowly. Cereal nurseries received a second cultivation, and weeds were hoed between plants in various corn plots. The weeding of alleys has been completed. A regional alfalfa nursery was planted early in the week.

The first crop of alfalfa is partly cut, without much chance for curing owing to wet weather. Plowed fallow in field C was duckfooted for the first time.

Bulls for the four breeding herds were trucked to the mountain lease, and electric fence units were installed. Range conditions there are excellent, about 5 inches of precipitation being recorded since June 10.

Among numerous station visitors were E. A. Cole of S.C.S., and Dr. C. F. Kraenzel, Montana State College. More than 500 were in attendance at the Farmers Union picnic on Wednesday. The Hill County AAA committee also held a meeting at the station.

Maximum temperature, 82°; minimum, 42°; precipitation, 1.46 inches.

JUDITH BASIN:

Although the week has been generally cool, we have had more sunshine during the middle of this week than at anytime during the month. On Friday a heavy rain accompanied by wind and hail brought 0.61 inch of water. There was only light hail damage on the station, and crops should recover almost completely. Garden crops were hurt more than those in the field. Areas near, however, reported as high as 75 percent hail damage.

Cultivation of the corn varieties was begun. Weeds are increasing as the wet weather continues to keep men out of the fields.

Visitors included W. M. Buck of Division of Livestock Meats and Wool, R. T. Clark of Bozeman, Director Clyde McKee, and a County Tour of Farmers conducted by County Agent H. L. Dusenberry.

Maximum temperature, 79°; minimum, 37°; precipitation, 1.30 inches.

HUNTLEY:

Except for the first two days, field work was again possible during the week. Plowing of fallow and green manure plots was finished and cultivation of row crops should be completed to-day. Roads and bulk fallow areas were cultivated with tractor equipment.

Rising temperatures have been favorable to all crops, which having a good supply of available soil moisture, are developing rapidly.

Spring grains are heading out, and flax and winter wheat are in bloom. Alfalfa has made a good growth and is about ready to cut. Because of delayed germination many plots of spring grains will be weedy despite the rapid growth of the grains during the last two weeks. Good progress was made in catching up on weed control measures during the week, but the fields still look very shaggy largely as a result of renewed growth of weeds plowed under or cultivated just previous to the last rains.

Maximum temperature, 84°; minimum, 41°; precipitation, 0.63 inch.

SHERIDAN:

The cool weather reported last week continued over a large part of the current week, but the last two days were much warmer and fairly clear. A heavy windstorm last evening (23rd) scattered hay badly that was bunched and left in the field.

Conditions of crops generally continued good, with normal growth, and normal emergence with late sown crops. Spring grain in the rotations is now heading, except on spring plowing, which is much later. All alfalfa on the station north of the railroad was cut, and hauling and weighing of same is being completed today. Yields generally were light because of the early spring drought, which was broken too late for the alfalfa to make much recovery. The first cultivation of corn was completed, and the shelterbelts cleared of weeds.

Maximum temperature, 84°; minimum, 41°; precipitation, 0.52 inch.

DICKINSON:

Cool, cloudy weather with one light shower early in the week was followed by a warm day on Friday with a maximum of 87° for the week and for the month to date. Crops were benefited by the sunshine and warmth. Rainfall so far in June amounts to 4.14 inches. This was well distributed with less run-off than in June of the past two years.

The present condition of grain crops is as good or better than at this date a year ago. Grains destroyed by hoppers to date, mainly on stubbled fields, are about equal to the loss from soil blowing in 1938.

Gopher oats and Steigum barley on the rotations are heading. Pilot wheat is ready to begin heading. These grains are tall and leafy and at present promise better than average yields.

Corn and potatoes on the rotations were cultivated for the second time. Potatoes were dusted with Dutox for control of blister beetles. Crested wheatgrass hay was harvested with the plants nearly ready to bloom.

Cultivation and weeding was continued in trees, gardens, and row crops.

Hoppers have been inactive most of the time during the past two weeks because of the cool, cloudy weather. They have been thinned out by poisoning on the station, but complete kills have been impossible because of the rank vegetation and unfavorable conditions for spreading. They are moving out of grass into grain fields in places. A small percentage of the hoppers are nearly large enough to fly, but many are still quite small.

Visitors included W. J. Leary, Extension Agronomist, H. O. Putman, Secretary, Northwest Crop Improvement Association, and a group

of county agents, elevator men, and farmers in attendance at the Grain School in Dickinson June 19 and 20; J. G. Crawford, Economist, Rural Bank of New South Wales, Australia, and Mrs. Crawford; and William Wiidakas, Assistant Agronomist, N. Dak. Experiment Station.

Maximum temperature, 87°; minimum, 43°; precipitation, 0.44 inch.

MANDAN:

Agronomy - Weather conditions gradually improved this week for such operations as haying, and growing conditions were better for corn and sorghum varieties than during the preceeding week.

Corn was cultivated the second time and sorghum the first time.

Approximately 12 tons of bromegrass and crested wheatgrass hay were stacked in the stack yard. The quality was good in spite of the fact that it was rained on twice the previous week. Apparently the cool, cloudy weather favored the preserving of the quality.

Farmers and other visitors were very numerous during the week and included on the 21st and 22nd county agents and elevator men in attendance at a two-day Grain school in Mandan, sponsored jointly by the Northwest Crop Improvement Association, Minneapolis, Federal Grain Supervisors Office, and the North Dakota Agricultural Extension Service. The representatives in charge were H. O. Putman, Secretary, Harry Millman, Grain Supervisor, William J. Leary, Extension Agronomist and F. Gray Burcher, Extension Pathologist.

Maximum temperature, 88°; minimum, 44°; precipitation, 1.13 inches.

Horticulture - The week was spent in taking winter injury notes and cutting dead wood out of the orchards. Most young trees passed through the winter without apparent injury. Many of the older trees showed dead branches, probably the result of former years of drought and sunscald. Most of them are now recovering and have made a good growth this year. The fruit crop gives promise of being the heaviest since 1932.

Vegetable plots were cultivated and hoed during the week. The weather has been a little too cold for good growth of some crops such as cucurbits, legumes, corn, and tomatoes, but excellent for cabbage, cauliflower, and root crops.

Alaska peas are ready for harvest, and some varieties of cauliflower and Chinese cabbage will be in a few days. This is the first time the latter vegetable has looked decidedly promising.

Shrubs at present in bloom include Philadelphus in variety, Hybrid rugosa roses, and Syringa japonica. Of perennials peonies are still presenting a good color display, Gaillardias, Coreopsis, Pyrethrum gypsophila, and Aquilegia are at their best.

BELLE FOURCHE:

The weather continued cool and unsettled during the fore part of the week, but the last three days were considerably warmer, and strong winds caused excessive drying of the soil. A hot wind on June 23 checked the growth of small grain and crested wheatgrass. The exceptionally rapid development of the latter crop has exhausted most of the available moisture in the soil, and the grass is attempting to head at a height of about 8 inches. Heading of winter wheat is practically completed, but the soil has become quite dry and is beginning to crack.

Surviving alfalfa is making an exceptionally good growth, but sweetclover on the rotation plots is a total failure, as most of that which emerged during the spring and all of the old sweetclover failed to survive the extended drought. Corn is up with perfect stands, and sorgo is beginning to emerge.

Work in the field included staking roads, trimming plots, and cultivating alleyways. Only a small portion of the sweetclover seeded early in May succeeded in emerging, and the various plots were reseeded to sweetclover during the week.

Maximum temperature, 98°; minimum, 44°; precipitation, 0.09 inch.

ARCHER:

The weather during the week ending June 24 was cool and dry. Plant growth recuperated to a considerable extent from the hail storm of the previous week. Hail damage made it necessary to reseed the beans, and it may become necessary to reseed the millet. Spring cereals which were in boot were most severely damaged by the hail. Corn made good growth.

Station activities consisted of putting up hay and cultivating corn. The latter operation is still in progress.

Director W. L. Quayle was a station visitor during the week.

Maximum temperature, 87°; minimum, 35°; precipitation, 0.15 inch.

NORTH PLATTE:

Good rain fell throughout the week bringing relief to drought conditions which have prevailed throughout the spring. There will be sufficient moisture to fill out the small grain, and the grain will be good quality. Harvest was started on Saturday, and most of the crop will be in the shock within the next week. Harvest is nearly a week to ten days earlier than normal. Yields of winter wheat will be above normal, and the yield from oats will be good. All the oats on cropped land in the DLA plots have been harvested. Some hail fell with the showers doing a little damage except breaking over a few stalks of grain and some stripping of corn leaves. The corn received its second cultivation during the week.

The annual crops field day which was held on Thursday was attended by about 250 people. Considerable interest in the various station projects was manifested by those who attended. Several agents of the SCS districts of the west half of the State held a special field day at the station on Friday.

Maximum temperature, 95°; minimum, 55°; precipitation, 1.51 inches.

AKRON:

Last week's very unsettled weather culminated Saturday in a maximum temperature of 104°. The highest previous June maximum in the 31-year station record is 103°. The week's weather has been dominated by almost daily local thunder showers. The station shared five of these lightly.

Premature ripening of station crops was not arrested by the week's rainfall, and the binder was started today, Saturday. It now appears that practically all the oats and barley will be harvested next week.

Foxtail and Proso millet and bean varieties were seeded. This marks the end of the current year's seeding except a few late dates. Rotation forage sorghum and corn and the increase corn were cultivated for the first time. A start was made on the second and throwing-in cultivation of the hybrid corn variety experiment. Rotation roads and isolated fallow blocks were cultivated, roadways of recently emerged crops were blocked out, grain varieties were rogued, grasshopper poison bait was scattered.

Forage sorghums, grain sorghums, and corn show nice stands everywhere except varieties on stubble land, where considerable delayed emergence will now probably be observed. Sudan grass drilled on the forage series has emerged, and that on the 10-acres across the railroad is now emerging. It may be said that despite the comparatively dry spring no particular trouble has been encountered in obtaining stands of the late spring seeded crops.

Dr. Hurley Fellows arrived Saturday morning to resume his studies on the foot-rot diseases of the cereal small grains.

Maximum temperature, 104°; minimum, 40°; precipitation, 0.50 inch.

COLBY:

The weather this week has been much more favorable than last week. It has not been nearly so hot or windy. Rain was recorded on four days, but none amounted to anything except that which fell Friday evening. The rain Friday evening amounted to only 0.41 inch here, but was much heavier elsewhere in the county, especially over the northern third. Severe hail damage was reported along the northern border of the county.

Winter wheat is almost ripe enough for harvesting with a binder. Barley is not quite ripe, but much of it has been cut to avoid further grasshopper damage. The wheat heads appear to be fairly well filled, but the grains are not as plump as it looked they would be before the hot winds of last week. Barley ranges from poor to fairly good. The oats and spring wheat will be generally light.

Corn is about 6 inches high and growing nicely. Rabbits and grasshoppers are doing some damage. The sorghums are up to good stands and are growing nicely. Where the rain was heavy last week and last night much replanting will have to be done.

Maximum temperature, 105°; minimum, 47°; precipitation, 0.46 inch.

HAYS:

The weather has been varied and generally dry. Although the sky has been obscured at times by threatening rain clouds, only two light showers of rain occurred during the week. Two days were very warm and windy.

The dry, windy weather has hastened the maturity of the wheat and has reduced both the quantity and quality of the yields.

Harvesting of wheat was commenced Monday in this vicinity, but it did not get into full swing until the last two days. The wheat is now all dead ripe except for some scattering green heads, but the harvest cannot be delayed for the maturity of these heads even though their presence slightly increases the moisture content of the thrashed grain. Plot harvesting on the project was commenced Thursday afternoon and more was done Friday afternoon. Today the combine will run all day until late in the evening. Twenty-five 1/10 acre and twenty 1/20 acre plots were harvested. These were all

fallowed plots, and the yields have ranged between 2 and 15 bushels per acre. Our yields are about the same as those being reported by the farmers. Practically no wheat sown on cropped land will be harvested.

Corn planted a week ago is now up to a fine stand. Most of the sorghums planted on the same day are also up to a fair stand. However, on fall plowed ground in Rotations 551 to 560 the soil dried out too rapidly after planting, and on these plots there is a poor and irregular stand. The stand is also poor on plots that were planted with the lister where no previous tillage had been done.

During the week a number of soil samples were collected, a large quantity of poison bran was spread for grasshoppers, some of the fallowed plots were surface tilled, and harvesting was commenced.

Maximum temperature, 107°; minimum, 57°; precipitation, 0.29 inch.

GARDEN CITY:

This week was a series of bluffs, so far as moisture was concerned. Clouds would gather which appeared to be good for a cloud burst, and dust would then roll in followed by a light shower and thunder and lightning. Moisture fell on four days, but only 0.19 inch was received.

Some of the replanted milo and kafir is coming up to fill in a few of the skips, but the stands in general are still thin. The cowpeas which came up to a good stand are being injured some by rabbits.

Maximum temperature, 96°; minimum, 51°; precipitation, 0.19 inch.

TUCUMCARI:

The week was characterized by much lower temperatures, relatively high wind movement, several cloudy days, and very little precipitation. Very heavy rains occurred in nearly all directions, but Tucumcari received only 0.19 inch in two showers.

Ranges are drying fast, and row crops are making but little growth. Where farmers are finding replanting necessary, it is too dry to replant. Stands on most station plots planted early this month range from fair to good, with some plots of beans, corn, and cotton very poor. The high wind movement, intense heat of ten days ago, and drought have made thinning of plots inadvisable. Plant growth has been retarded so greatly that seedlings are in poor condition to withstand high wind, additional drought, or a torrential rain.

Wheat is being cut as rapidly as possible in the southern part of the county, and yields are higher than anticipated. The majority of fields are averaging from 8 to 20 bushels. Heavy rains late last fall enabled the soil to store a large amount of moisture, largely offsetting subnormal precipitation the past six weeks.

Maximum temperature, 99°; minimum, 55°; precipitation, 0.19 inch.

DALHART:

A rain of 1.21 inches which fell Tuesday afternoon and night gave moisture for planting. It was Thursday before it was dry enough to plant. On Thursday and Friday one date of planting of the variety test and the kafir and milo rotations were planted. A rain of 0.49 of an inch Friday evening prevented planting today. It will take a week to finish planting everything that remains to be planted. On account of the lateness of the season it may not be possible to plant every thing that has been planned, but present plans are to continue the planting until the first of July.

Other work during the week has included the starting of a building which is to shelter some recording weather instruments.

Maximum temperature, 98°; minimum, 55°; precipitation, 1.74 inches.

BIG SPRING:

Although the temperatures have not been quite so high during the past week, the dry weather continues unabated except for a light shower of 0.14 inch. A cloud burst in the next county east washed out the railroad bridge and destroyed a number of small homes. There is considerable acreage in this county that has not been planted as yet. The dead line date for planting cotton with any assurance of maturing has been reached, although it is probable that many acres will be planted to this crop if rain is received before July 1.

The Station crops are making some growth in most instances although some plants are dying on the poorer methods. The June 15 date of sorghums, which was planted on schedule, has emerged to fair stands. Weed killing in one form or another has occupied most of the time of the station force. Rotation plots were knifed over, and the cowpeas were cultivated. The June 1 date of sorghums and the cotton varieties were thinned. Roadways in the rest of the co-operative field were staked and trimmed.

Maximum temperature, 104°; minimum, 62°; precipitation, 0.14 inch.

LAWTON:

Three rains from the 18th to the 21st, amounting to 1.32 inches, followed by several days of partly cloudy weather, moderate temperatures and wind velocity provided one of the most favorable growing periods experienced this season. There was not enough run-off to provide stock water, and surface moisture in the cultivated fields is very good. The total precipitation for the month to date amounts to 2.87 inches.

Corn is silking and tasseling under very favorable conditions, although a few of the earlier tassels were badly burned by high temperatures. Kafir in the rotation plots is making a rapid, vigorous growth. Feterita continues to grow slowly and appears to be affected with a root fungus disease and handicapped by chinch bugs as well. Sorghums in the chinchbug sorghum resistance project are in many instances suffering severe injury by some root fungus that is sharply restricting growth and causing a heavy reduction in stands. Dr. K. Starr Chester, head of the Botany and Pathology Department, A. & M. College, Stillwater, Okla., collected samples during the week for the purpose of identifying the organism.

Field forces have been busily engaged in cotton and sorghum thinning and cultivation of all row crops.

WOODWARD:

The wind reported last week continued until Sunday morning June 18, and for a 96-hour period averaged 14.3 miles per hour, making this the steadiest and most severe continuous June wind in at least 10 years. Late Sunday morning the wind moderated, and since that time precipitation has been registered on four days. Three days during the week were too wet for field work.

The rains have delayed harvest both on the station and in the adjoining area. There are about 30 DLA plots left to harvest as soon as weather will permit. Grain sorghums planted on DLA plots and the sorghum project have, in most cases, emerged to excellent stands.

Visitors at the station this week included J. R. Swallen of the Division of Plant Exploration and Introduction and a group of 30 or more Soil Conservation Service officials, range examiners, etc., from western Oklahoma and adjoining areas in Texas. This group spent about a day and a half at the station.

Maximum temperature, 101°; minimum, 62°; precipitation, 1.88 inches.

PENDLETON:

This week has been one of inspections. The annual field day was held on June 20, with a very fair crowd in attendance. On June 21, the garden clubs of Umatilla County inspected the station grounds. On the evening of June 21, the Pendleton Rotary club toured the station and had a picnic on the station grounds.

Mr. Joe Belanger of the SCS has been here all week making soil moisture and nitrate determinations on trashy fallow plots. Dr. Roderick Sprague, of the Division of Cereal Crops and Diseases, Corvallis, was here two days making counts on his covered smut trials. Mr. C. A. Suneson of Davis, Calif., spent three days going over the cereal work on this station.

Temperatures during the week were very favorable for the small grains. Winter wheat in most sections is beginning to ripen, and spring wheat looks much better than it did two weeks ago. Harvest of canning peas is under way in all the pea growing sections, with very good yields.

Maximum temperature, 89°; minimum, 41°; precipitation, 0.14 inch.

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Dr. C. E. Leighty left Washington June 28 for an extended trip to field stations starting at Mandan, North Dakota.